§ 80.599 How do I calculate volume balances for designation purposes?

(a) Quarterly compliance periods. The quarterly compliance periods are shown in the following table:

Beginning date of quarterly compliance period	Ending date of quarterly compliance period
June 1, 2006	September 30, 2006.
October 1, 2006	December 31, 2006.
January 1, 2007	March 31, 2007.
April 1, 2007	May 31, 2007.
June 1, 2007	September 30, 2007.
October 1, 2007	December 31, 2007.
January 1, 2008	March 31, 2008.
April 1, 2008	June 30, 2008.
July 1, 2008	September 30, 2008.
October 1, 2008	December 31, 2008.
January 1, 2009	March 31, 2009.
April 1, 2009	June 30, 2009.
July 1, 2009	September 30, 2009.
October 1, 2009	December 31, 2009.
January 1, 2010	March 31, 2010.
April 1, 2010	May 31, 2010.
June 1, 2010	September 30, 2010.

(1) The annual compliance periods are shown in the following table:

Beginning date of annual compliance period	Ending date of annual compliance period
June 1, 2006	May 31, 2007.
June 1, 2007	June 30, 2008.
July 1, 2008	June 30, 2009.
July 1, 2009	May 31, 2010.
June 1, 2010	June 30, 2011.
July 1, 2011	May 31, 2012.
June 1, 2012	June 30, 2013.
July 1, 2013	May 31, 2014.

(2) [Reserved]

(b) *Volume balance for motor vehicle diesel fuel.* (1) A facility's motor vehicle diesel fuel volume balance is calculated as follows:

$$MVB = MV_I - MV_O - MV_{INVCHG}$$

Where:

MVB = the volume balance for motor vehicle diesel fuel for the compliance period.

MV_I = the total volume of all batches of fuel designated as motor vehicle diesel fuel received for the compliance period. Any motor vehicle diesel fuel produced by or imported into the facility shall also be included in this volume.

MV_O = the total volume of all batches of fuel designated as motor vehicle diesel fuel delivered for the compliance period.

MV_{INVCHG} = the total volume of 15 ppm sulfur and 500 ppm sulfur motor vehicle diesel fuel in inventory at the end of the compliance period minus the total volume of 15 ppm sulfur and 500 ppm sulfur motor vehicle diesel fuel in inventory at the beginning of the compliance period, including accounting for any corrections in inventory due to volume swell or shrinkage, difference in measurement calibration between receiving and delivering meters, and similar matters, where corrections that increase inventory are defined as positive.

(2) Calculate the motor vehicle diesel fuel received, as follows:

$$MV_I = MV15_I + MV500_I$$

Where:

$MV15_I$ = the total volume of all the batches of fuel designated as 15 ppm sulfur motor vehicle diesel fuel received for the compliance period. Any motor vehicle diesel fuel produced by or imported into the facility shall also be included in this volume. Any untaxed and undyed California diesel fuel received by a terminal pursuant to § 80.617 (b)(1) shall be included in this volume.

$MV500_I$ = the total volume of all batches of fuel designated as 500 ppm sulfur motor vehicle diesel fuel received for the compliance period. Any motor vehicle diesel fuel produced by or imported into the facility shall also be included in this volume.

(3) Calculate the motor vehicle diesel fuel delivered, as follows:

$$MV_O = MV15_O + MV500_O$$

Where:

$MV15_O$ = the total volume of all batches of fuel designated as 15 ppm sulfur motor vehicle diesel fuel and delivered during the compliance period.

$MV500_O$ = the total volume of all batches of fuel designated as 500 ppm sulfur motor vehicle diesel fuel and delivered during the compliance period.

(4) The neutral or positive volume balance required for purposes of compliance with § 80.598(b)(9)(vi) and (b)(9)(vii)(A) means that the net balance of motor vehicle diesel fuel in inventory as of the end of the last day of the compliance period ($MVNB_E$) must be greater than or equal to zero. MVNBE is defined by the following equation:

$$MVNB_E = MV15_{BINV} + MV500_{BINV} + \Sigma MVB$$

Where:

$MV15_{BINV}$ = the total volume of fuel designated as 15 ppm sulfur motor vehicle diesel fuel in inventory at the beginning of the program on June 1, 2006.

$MV500_{BINV}$ = the total volume of fuel designated as 500 ppm sulfur motor vehicle

diesel fuel in inventory at the beginning of the program on June 1, 2006. Any #2D 500 ppm sulfur MVNRLM in inventory at the beginning of the program on June 1, 2006 may be designated as motor vehicle diesel fuel.

ΣMVB = the sum of the balances for motor vehicle diesel fuel for the current compliance period and previous compliance periods.

(5) The volume balance required for purposes of compliance with §80.598(b)(9)(vii)(B) means:

$-\mathrm{MVB} \leq 0.02 \times \mathrm{MV_I}$

(6) Calculations in paragraphs (b)(4) and (b)(5) of this section may be combined for all facilities wholly owned by an entity.

(7) For purposes of calculations in paragraphs (b)(1) through (b)(5) of this section, for batches of fuel received from facilities without an EPA facility ID#, any batches of fuel received on which taxes have been paid pursuant to IRS code (26 CFR part 48) shall be deemed to be $\mathrm{MV15_I}$ or $\mathrm{MV500_I}$ as appropriate for purposes of this paragraph.

(c) *Volume balance for high sulfur NRLM diesel fuel and heating oil.* (1) A facility's high sulfur NRLM balance is calculated as follows:

$$\mathrm{HSNRLMB} = \mathrm{HSNRLMI_I} - \mathrm{HSNRLM_O} - \mathrm{HSNRLM_{INVCHG}}$$

Where:

HSNRLMB = the balance for high sulfur NRLM diesel fuel for the compliance period.

$\mathrm{HSNRLM_I}$ = the total volume of all batches of fuel designated as high sulfur NRLM received diesel fuel for the compliance period. Any high sulfur NRLM produced by or imported into the facility shall also be included in this volume.

$\mathrm{HSNRLM_O}$ = the total volume of all batches of fuel designated as high sulfur NRLM diesel fuel delivered for the compliance period.

$\mathrm{HSNRLM_{INVCHG}}$ = the volume of high sulfur NRLM diesel fuel in inventory at the end of the compliance period minus the volume of high sulfur NRLM diesel fuel in inventory at the beginning of the compliance period, including accounting for any corrections in inventory due to volume swell or shrinkage, difference in measurement calibration between receiving and delivering meters, and similar matters, where corrections that increase inventory are defined as positive.

(2) The volume balance required for purposes of compliance with §80.598(b)(9)(viii)(A) means one of the following:

(i) $\mathrm{HSNRLMB} \geq 0$

(ii) $(\mathrm{HSNRLM_O} + \mathrm{HSNRLM_{INVCHG}}) / \mathrm{HSNRLM_I} \leq (\mathrm{HO_O} + \mathrm{HO_{INVCHG}}) / \mathrm{HO_I}$

(3) A facility's heating oil volume balance is calculated as follows:

$$\mathrm{HOB} = \mathrm{HO_I} - \mathrm{HO_O} - \mathrm{HO_{INVCHG}}$$

Where:

HOB = the balance for heating oil for the compliance period.

$\mathrm{HO_I}$ = the total volume of all batches of fuel designated as heating oil received for the compliance period. Any heating oil produced by or imported into the facility shall also be included in this volume.

$\mathrm{HO_O}$ = the total volume of all batches of fuel designated as heating oil delivered to all downstream entities for the compliance period.

$\mathrm{HO_{INVCHG}}$ = the volume of heating oil in inventory at the end of the compliance period minus the volume of heating oil in inventory at the beginning of the compliance period, including accounting for any corrections in inventory due to volume swell or shrinkage, difference in measurement calibration between receiving and delivering meters, and similar matters, where corrections that increase inventory are defined as positive.

(4) The volume balance required for purposes of compliance with §80.598(b)(9)(viii)(B) means:

$\mathrm{HOB} \leq 0$

(5) Calculations in paragraphs (c)(3) and (c)(4) of this section may be combined for all facilities wholly owned by an entity.

(6) For purposes of calculations in paragraphs (c)(1) through (c)(4) of this section, for batches of fuel received from facilities without an EPA facility ID#, any batches of fuel received marked pursuant to §80.510(d) or (f) shall be deemed to be $\mathrm{HO_I}$, any batches of fuel received marked pursuant to §80.510(e) shall be deemed to be $\mathrm{HO_I}$ or $\mathrm{LM500_I}$, any diesel fuel with less than or equal to 500 ppm sulfur that is dyed pursuant to §80.520(b) and not marked pursuant to §80.510(d) or (f) shall be deemed to be NRLM diesel fuel, and any diesel fuel with less than or equal

to 500 ppm sulfur which is dyed pursuant to §80.520(b) and not marked pursuant to §80.510(e) shall be deemed to be NR diesel fuel.

(d) *Volume balance for NR diesel fuel.* (1) A facility's 500 ppm nonroad diesel fuel balance is calculated as follows:

$$NR500B = NR500_I - NR500_O - NR500_{INVCHG}$$

Where:

NR500B = the balance for 500 ppm sulfur NR diesel fuel for the compliance period.

$NR500_I$ = the total volume of all batches of fuel designated as 500 ppm sulfur NR diesel fuel received for the compliance period. Any 500 ppm sulfur NR diesel fuel produced by or imported into the facility shall also be included in this volume.

$NR500_O$ = the total volume of all batches of fuel designated as 500 ppm sulfur NR diesel fuel delivered for the compliance period.

$NR500_{INVCHG}$ = the volume of 500 ppm sulfur NR diesel fuel in inventory at the end of the compliance period minus the volume of 500 ppm sulfur NR diesel fuel in inventory at the beginning of the compliance period, and accounting for any corrections in inventory due to volume swell or shrinkage, difference in measurement calibration between receiving and delivering meters, and similar matters, where corrections that increase inventory are defined as positive.

(2) The volume balance required for purposes of compliance with §80.598(b)(9)(ix) means one of the following:

(i) $NR500B \geq 0$

(ii) $(NR500_O + NR500_{INVCHG}) / NR500_I \leq (LM500_O + LM500_{INVCHG}) / LM500_I$

Where:

$LM500_I$ = the total volume of all batches of fuel designated as 500 ppm sulfur LM diesel fuel received for the compliance period. Any 500 ppm sulfur LM diesel fuel produced by or imported into the facility shall also be included in this volume.

$LM500_O$ = the total volume of all batches of fuel designated as 500 ppm sulfur LM diesel fuel delivered for the compliance period.

$LM500_{INVCHG}$ = the volume of 500 ppm sulfur LM diesel fuel in inventory at the end of the compliance period minus the volume of 500 ppm sulfur LM diesel fuel in inventory at the beginning of the compliance period, and accounting for any corrections in inventory due to volume swell or shrinkage, difference in measurement calibration between receiving and delivering meters, and similar matters, where corrections that increase inventory are defined as positive.

(e) *Anti-downgrading for motor vehicle diesel fuel.* (1) A facility must satisfy the provisions in either paragraphs (e)(2), (e)(3), (e)(4), or (e)(5) of this section to comply with the anti-downgrading limitation of paragraph §80.527(c)(1), for the annual compliance periods defined in §80.527(c)(3).

(2) The volume of #2D 15 ppm sulfur motor vehicle delivered must meet the following requirement:

$$(\#2MV15_O + \#2MV15_{INVCHG}) \geq 0.8 * \#2MV15_I$$

Where:

$\#2MV15_O$ = the total volume of fuel delivered during the compliance period that is designated as #2D 15 ppm sulfur motor vehicle diesel fuel.

$\#2MV15_{INVCHG}$ = the total volume of diesel fuel designated as #2D 15 ppm sulfur motor vehicle diesel fuel in inventory at the end of the compliance period minus the total volume of #2D 15 ppm sulfur motor vehicle diesel fuel in inventory at the beginning of the compliance period, and accounting for any corrections in inventory due to volume swell or shrinkage, difference in measurement calibration between receiving and delivering meters, and similar matters, where corrections that increase inventory are defined as positive.

$\#2MV15_I$ = the total volume of fuel received during the compliance period that is designated as #2D 15 ppm sulfur motor vehicle diesel fuel. Any untaxed and undyed California diesel fuel received by a terminal pursuant to §80.617(b)(1) shall be included in this volume.

(3) The volume of #2D 500 ppm sulfur motor vehicle diesel fuel delivered must meet the following requirement:

$$\#2MV500_O \leq \#2MV500_I - \#2MV500_{INVCHG} + 0.2 * \#2MV15_I$$

Where:

$\#2MV500_O$ = the total volume of fuel delivered during the compliance period that is designated as #2D 500 ppm sulfur motor vehicle diesel fuel.

$\#2MV500_I$ = the total volume of fuel received during the compliance period that is designated as #2D 500 ppm sulfur motor vehicle diesel fuel.

$\#2MV500_{INVCHG}$ = the total volume of diesel fuel designated as #2D 500 ppm sulfur motor vehicle diesel fuel in inventory at the end of the compliance period minus the total volume of #2D 500 ppm sulfur

motor vehicle diesel fuel in inventory at the beginning of the compliance period, and accounting for any corrections in inventory due to volume swell or shrinkage, difference in measurement calibration between receiving and delivering meters, and similar matters, where corrections that increase inventory are defined as positive.

(4) The following calculation may be used to account for wintertime blending of kerosene and the blending of non-petroleum diesel:

$$\#2MV500_O \leq \#2MV500_I + \#2MV500_P - \#2MV500_{INVCHG} + 0.2 * (\#1MV15_I + \#2MV15_I + NPMV15_I)$$

Where:

$\#1MV15_I$ = the total volume of fuel received during the compliance period that is designated as #1D 15 ppm sulfur motor vehicle diesel fuel. Any motor vehicle diesel fuel produced by or imported into the facility shall not be included in this volume.

$NPMV15_I$ = the total volume of fuel received during the compliance period that is designated as NP15 ppm sulfur motor vehicle diesel fuel. Any motor vehicle diesel fuel produced by or imported into the facility shall not be included in this volume.

$\#1MV15_P$ = the total volume of fuel produced by or imported into the facility during the compliance period that was designated as #1D 15 ppm sulfur motor vehicle diesel fuel when it was delivered.

(5) The following calculation may be used to account for wintertime blending of kerosene, the blending of non-petroleum diesel, and/or changes in the facility's volume balance of motor vehicle diesel fuel resulting from a temporary shift of 500 ppm sulfur NRLM diesel fuel to 500 ppm sulfur motor vehicle diesel fuel during the compliance period:

$$\#2MV500_O < \#2MV500_I + \#2MV500_P - \#2MV500_{INVCHG} + 0.2 * \#2MV15_I + \#1MV15_B + \#2NRLM500_S + NP_B$$

Where:

$\#1MV15_B$ = the total volume of fuel received during the compliance period that is designated as #1D 15 ppm sulfur motor vehicle diesel fuel and that the facility can demonstrate they blended into #2D 500 ppm sulfur motor vehicle diesel fuel. Any motor vehicle diesel fuel produced by or imported into the facility shall not be included in this volume.

$\#2MV500_P$ = the total volume of fuel produced by or imported into the facility during the compliance period that was designated as #2MV 500 ppm sulfur motor vehicle diesel fuel when it was delivered.

$\#2NRLM500_S$ = the total volume of #2D 500 ppm sulfur NRLM diesel fuel that the facility can demonstrate they redesignated as #2D 500 ppm sulfur motor vehicle diesel fuel during the compliance period.

NP_B = the total volume of fuel received during the compliance period that is designated as NP15 ppm sulfur motor vehicle diesel fuel, and/or NP500 ppm sulfur motor vehicle diesel fuel which the facility can demonstrate they blended into #2D 500 ppm sulfur motor vehicle diesel fuel.

(f) *Inventory adjustments.* Adjustments to inventory under this section must be based on normal business practices for the industry, appropriate physical plant operations and use of good engineering judgments.

(g) *Unique circumstances.* EPA may, at its discretion, grant a fuel distributor's application to modify its inventory of motor vehicle diesel fuel, NRLM diesel fuel, or heating oil for a given compliance period. EPA may grant an application to address unique circumstances, where appropriate, such as the start up of a new pipeline or pipeline segment.

(h) *Additional requirements for aggregated facilities consisting of a refinery and a truck loading terminal.* In addition to the volume balance requirements required by paragraphs (a) through (g) of this section, aggregated facilities consisting of a refinery and a truck loading terminal are responsible for balance calculations on the volume difference between the total volume of diesel fuel sold over the truck loading terminal rack and the production volume from the batch reports. Mathematically, the difference will be the volume of fuel received from external sources and passed through to another facility.

[69 FR 39194, June 29, 2004, as amended at 70 FR 40896, July 15, 2005; 70 FR 70511, Nov. 22, 2005; 71 FR 25720, May 1, 2006; 75 FR 22974, Apr. 30, 2010]

§ 80.600 What records must be kept for purposes of the designate and track provisions?

(a) In addition to the requirements of § 80.592 and § 80.602, the following recordkeeping requirements shall apply to refiners and importers: